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ABSTRACT

This paper briefly reviews the learning outcome aspects of seven recent follow-up studies completed for seven different transfer discipline areas at William Rainey Harper College (Illinois). It notes an increasing interest by the field of institutional research in evaluating how students learn. Faculty in the fields of psychology, English, management, speech, geography, the honors program, history and political science have been using surveys evaluating to what extent students achieve general learning skills. Major findings have indicated that Harper College has its greatest impact on building self-esteem, developing problem solving skills, choosing a career path, communication skills, evaluation of information, and library research. The college seems to have little effect on building skills to work in small groups. Grades do not seem to have a negative effect on learning, and lectures and class discussions are perceived to be the two most effective teaching delivery systems. Only assigned papers were rated as a clearly superior classroom assessment measure. Forces moving faculty to become more concerned about evaluating general education learning are identified and include national goals on learning, diversity pressures, the focus on outcomes of accrediting agencies, and a faculty development focus on teaching and learning delivery systems. Institutional research is seen to be the obvious partner of faculty in developing good surveys and research strategies in learning outcomes. Contains one table and seven references. (DB)

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BEGINNING THE DIALOGUE
ON EVALUATING HOW STUDENTS LEARN

by

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This paper was presented at the Thirty-Sixth Annual Forum of the Association for Institutional Research held in Albuquerque, New Mexico, May 5-8, 1996. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Editor
AIR Forum Publications

ABSTRACT

This paper examines a trend in AIR to begin research in learning outcomes in the classroom. The study focuses on the learning outcome bent of seven recent follow-up studies completed for seven different transfer discipline areas at William Rainey Harper College which is located in Palatine, Illinois.

It appears that the field of Institutional Research is now becoming interested for the first time in its history in evaluating how students learn. This was demonstrated by Pat Terenzini's monumental study on the key factors affecting critical thinking skills published in Research in Higher Education in February of 1995. This was followed by the Forum in Boston in May of 1995 where the keynote address given by Carol Twigg focused on the need for a national learning infrastructure. In addition, four papers focused on evaluating how students learn. When the author gave this paper at the Illinois AIR Conference in November of 1995 he asked the audience if any were yet involved in learning outcomes research. Not one person said they were but some indicated they had talked to faculty who were involved and know that at some point they would have to become involved in this type of research.

Faculty in transfer oriented classes at Wm. Rainey Harper College are now, for the first time, addressing questions on how students learn in their classroom for their Program Review. Studies for Psychology, English, Honors, Management, Speech, Geography, History and Political Science all focus on to what extent students achieve general learning skills. Many questions focused on what most contributed to students' learning at Harper and areas needing improvement. Other questions focused on general cognitive skills such as various communication skills, problem solving, critical thinking, ability to work in groups, etc. Other items focused on the development of reading habits, self-esteem, leadership friendships, networks, global concerns and volunteering in the community. Some items asked about how grading affected the learning process. Still other items evaluated various teaching delivery systems and various classroom assessment techniques. Another concern raised was the value system of students in determining what success in college meant.

The major findings indicated Harper College had its greatest impact on building self-esteem, developing problem solving skills gaining help in choosing a career path, communication skills, evaluation of information and library research. Harper College seemed to have the least effect on building skills to work in small groups even though this was thought to be important. Grades do not seem to have a negative effect on learning with the exception of experimenting with different learning styles. Lectures are one of the two most perceived effective teaching delivery systems along with class discussion. Multiple choice testing as classroom assessment was rated effective, very close to essay and short answer testing. Only assigned papers were rated as a clearly superior classroom assessment. Honors students do not seem to gain much more in learning than ordinary students with the exception of the types of transfer colleges chosen.

In the last two years a number of items in follow-up studies have been focusing on learning outcomes in transfer related disciplines at Harper College. Some of the types of items by discipline are as follows:

Table I

Types of Learning Outcome Follow-up Survey Items by Discipline

<u>Discipline</u>	<u>Follow-up Survey Item Type</u>
1- Transfer Management	- Thirty-one management skills listed - asks both how important are these skills for their job and how well prepared were they in this skill area.

Table I (continued)

Types of Learning Outcome Follow-up Survey Items by Discipline

Discipline	Follow-up Survey Item Type
2- Speech	- Eight speaking and theatre skills - ask how frequently they use them in their current situation and how well prepared were they in this skill area.
3- Geography/History/Political Science	- Class size experienced and evaluation of how class size affected learning process. - Twenty descriptions of learning environment rating of each environment at Harper and at the college to which they transferred. - Five teaching methods and eight assessment listed asked how frequently they encountered these and how effective they were.
4- Psychology	- Nineteen possible ways psychology may have influenced their life plan. - Experiences with volunteer projects - Class size and effect on learning - Ten teaching methods eight means of assessment How frequently encountered - how effective each was

Table I (continued)

Types of Learning Outcome Follow-up Survey Items by Discipline

<u>Discipline</u>	<u>Follow-up Survey Item Type</u>
5- Honors Program	- Types of College transferred to - Affect on leadership style, creativity, self-esteem, friendship networks developed, awareness of global concerns, reading habits, oral reporting, writing skills, teamwork, succeeding in life, level of motivation, competitiveness, desire to learn further. - Factors that most contributed to their learning
6- English I	- How writing topics were chosen and why - How grades affect how students write - Comfort in working in group writing projects - Perceived importance of grades and its fairness - Preference among three ways of teaching English composition - Contributions to success in college - Perception of what contributes to high grades in English
7- English II	- Eight English composition skill areas - frequency of use and degree of preparation - Perception of fairness of level of English placed in by placement test

In each of these follow-up surveys faculty discussed the results of these studies to decide how they could modify their instructional delivery to improve the learning outcomes.

There are a number of forces at work which are moving faculty to become more concerned about evaluating the general education learning taking place in the classroom:

- a) National goals on learning
- b) Diversity pressures
- c) Accrediting agencies focus on outcomes
- d) Emphasis on distance learning
- e) Explosion of technology to support learning environments
- f) Pressures created by unprepared students
- g) Faculty development change of focus to teaching and learning delivery systems
- h) Movement from hierarchical organizations to TQM team approaches
- i) Breakthrough developments of new learning environments.

These break through wholistic learning environments involve either groups of courses the same students are all enrolled in or simulated organizational learning environments. All these environments have the following in common: The instructor no longer the sole authority, students having more responsibility for their learning, cross discipline learning, intense group work, and high student enthusiasm.

As all these forces come to a head at the same time faculty look around for help in evaluating and measuring these outcomes. Institutional research offices are a natural place to look even though we traditionally have not done this type of research. There are a number of challenges in doing this type of research. First the possibilities for criteria as measured by

behavior and attitude changes are very large. It will take some time to develop a complete list of criteria survey items. Just as challenging is moving from evaluative and attitudinal items to behavioral based items which will lend more credibility to the results. For example, instead of asking respondents how they feel about reading or how competent they feel in reading, questions would center on how often they read, the type of material they read and how they use their reading. Another critical issue is determining if the behavioral or attitude changes are permanent or simply reflect the emotions of the class. This can only be determined by surveying students several years after the class or event.

Besides measuring learning changes by survey it will be important to explore testing samples of students to independently determine if certain learning changes have taken place. This research could also examine if there are strong relationships between these test results and survey results. Testing students after the fact is expensive and difficult to motivate students to objectively take tests which are not required by their program.

Even more challenging is to develop comparison groups which would allow more meaningful interpretation to changes in behavior, attitudes, evaluations or in test results. Many times there is no true comparison group available so a less meaningful quasi comparison group must be considered. In addition, comparison groups are difficult to construct to provide comparable experiences and ability level so that only the teaching strategy or intervention in question varies. Faculty are often reluctant to allow the use of comparison groups as it can seem very threatening.

Finally, this type of research requires the examination of the magnitude of the survey or test differences in relationship to the additional resources required by a new delivery system or

intervention. This implies a panel of persons representing both the academic and resource sides of the institution making judgments concerning the costs and benefits of any given strategy.

Thus, let the dialogue begin on research strategies so we, as institutional research professionals, can prepare for the learning outcome studies immediately ahead of us.

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